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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/033,146	10/27/2001	Mingte Chen	SBL0004P1US	7132
60/975 7590 04/21/2011 CAMPBELL STEPHENSON LLP 11401 CENTURY OAKS TERRACE BLDG. H, SUITE 250 AUSTIN, TX 78758				
			EXAMINER JOO, JOSHUA	
			ART UNIT 2445	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/033,146

Applicant(s)

CHEN ET AL.

Examiner

JOSHUA JOO

Art Unit

2445

**– The MAILING DATE of this communication appears on the cover sheet with the correspondence address –
Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 February 2011.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,6-23,25-34,36-45,47-55,58 and 60-71 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,6-23,25-34,36-45,47-55,58 and 60-71 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 October 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of Priorities Cited (PTO-502)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 2/16/11
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

Detailed Action

This Office action is in response to Applicant's communication filed on February 16, 2011.

Claims 1, 6-23, 25-34, 36-45, 47-55, 58, 60-71 are pending in the Office action.

Response to Arguments

Claim Rejections - 35 USC § 101

Rejection of claims under 35 U.S.C. 101 in the Office action dated August 16, 2010 is withdrawn in view of Applicant's amendment.

Claim Rejections - 35 USC § 112

Rejection of claims under 35 U.S.C. 112, second paragraph in the Office action dated August 16, 2010 is withdrawn in view of Applicant's amendment.

Claim Rejections - 35 USC § 103

Applicant's arguments with respect to the rejection(s) of claim(s) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, a new ground(s) of rejection is made in this Office action. The new ground(s) of rejection is necessitated by Applicant's amendment.

Information Disclosure Statement

The information disclosure statement (IDS) submitted February 16, 2011 is in compliance with the provisions of 37 CFR 1.97. Accordingly, the IDS is considered by the Examiner.

Claim Objections

Claims 45, 47-54 are objected to because of the following informalities:

- a) Regarding claim 45, the claim does not end in a period.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 6, 8-13, 19-23, 25-30, 33-34, 36-41, 44-45, 47-52, 55, 58, 60-65, 68, and 71 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pell, US Patent No. 7,392,540 (Pell hereinafter), in view of Martin et al. US Publication No. 2003/0023734 (Martin hereinafter) and Fisher et al. US Patent No. 6,212,511 (Fisher hereinafter).

As per claim 1, Pell teaches substantially the invention as claimed including a method comprising:

controlling a user interface presented by a web browser, comprising
establishing a connection between the web browser and a web server (col. 5, lines 9-10. Browser, col. 6, lines 18-21, 26-34. Connect to server.),
causing the web browser to provide a wait request to the web server via the connection, wherein,
the causing results in the web browser being ready to accept an asynchronous message from the web server (col. 8, lines 36-46. Request from agent, "log in" procedure. col. 5, lines 40-52; col. 7, lines 26-30. Identify available agent and initiate link with agent.),
the asynchronous message is asynchronously pushed from the web server, the wait request is associated with the web browser (col. 7, lines 17-19. Receive request.), and

the wait request facilitates pushing the asynchronous message from the web server to the web browser; identifying a source of the asynchronous message, associating the wait request with the source wherein associating the wait request with the source, wherein the associating identifies the web browser as a recipient of the asynchronous message (col. 5, lines 35-37; col. 8, lines 50-54, 63-67. Match particular customer to a particular agent.); and

in response to the web server receiving an incoming event,
asynchronously pushing the asynchronous message from the web server to the web browser, wherein the asynchronous message corresponds to the incoming event (col. 7, lines 17-19, 25-31. Receive request. col. 9, lines 53-55. Send request from user to agent.), and

the asynchronous message causes the web browser to present a user interface change in response to the web browser receiving the asynchronous message (col. 6, lines 47-50. Establish link between browsers. col. 9, lines 53-55. Send a support request to selected agent.).

Pell teaches of a connection between the web browser and a web server but does not specifically teach that the connection is a persistent connection, wherein the persistent connection is maintained for a period of time. Pell does not specifically teach the providing the wait request allows the web browser to perform a task other than awaiting receipt of the asynchronous message, at least during the period of time, and facilitates pushing the asynchronous message via the persistent connection. Pell teaches of pushing the asynchronous message but not specifically via the persistent connection. Pell does not specifically teach the wait request specifies a target process of a plurality of processes, the processes are configured to generate asynchronous messages; the source of the asynchronous message is the target process.

Martin teaches of establishing a persistent connection between a web browser and a web server, wherein the persistent connection is maintained for a period of time (Paragraph 0021, 0055. Permanent connection), wherein a request provided via the persistent connection allows the web browser to perform a task other than awaiting receipt of an asynchronous message; and wherein the request facilitates pushing

the asynchronous message via the persistent connection (Paragraphs 0021, 0055. Client can perform other tasks until a notification is received.).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings for the connection between the web browser and a web server as taught by Pell to be a persistent connection, wherein the persistent connection is maintained for a period of time; to provide the wait request via the persistent connection that allows the web browser to perform a task other than awaiting receipt of an asynchronous message; and for the request to facilitate pushing the asynchronous message via the persistent connection. The motivation for the suggested combination is that Martin's teachings would improve Pell's teachings by allowing the web browser to perform multiple tasks, which would increase efficiency, and allowing the server to initiate messages to the client, especially when the client is behind a firewall.

Fisher teaches of a request that specifies a target process of a plurality of processes, and the processes are configured to generate asynchronous messages, wherein the source of the asynchronous message is the target process (col. 4, lines 43-48; col. 5, lines 18-22, 46-50; col. 14, lines 25-36; col. 15, lines 1-11, 21-27).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings for the wait request to specify a target process of a plurality of processes, and for the processes to be configured to generate asynchronous messages, wherein the source of the asynchronous message is the target process. The motivation for the suggested combination is that Fisher's teachings would improve the suggested system by enabling users to register for event notifications from specified sources while limiting the event notifications to authorized users.

As per claim 19, Pell teaches substantially the invention as claimed including a method comprising:

establishing a first connection between a web browser and a web server, wherein the first connection is maintained for a period of time (col. 5, lines 9-10. Browser. col. 6, lines 18-21, 26-34. Connect to server.);

establishing a second connection between the web server and a business process server (col. 5, lines 46-50. Path between services to permit interaction.);

controlling a user interface presented by the web browser by registering the web browser with the business process server (col. 8, lines 36-46. Request from agent. "log in" procedure with rendezvous service.);

causing the web browser to provide a wait request to the web server via the first connection, wherein, the causing results in the web browser being ready to accept an asynchronous message from the web server, the asynchronous message is asynchronously pushed from the web server, the wait request is associated with the web browser (col. 8, lines 36-46. Request from agent, "log in" procedure. col. 5, lines 40-52; col. 7, lines 26-30. Identify available agent and initiate link with agent.), and

the wait request facilitates pushing the asynchronous message from the web server to the web browser; identifying a source of the asynchronous message; and associating the wait request with the source, wherein the associating identifies the web browser as a recipient of the asynchronous message (col. 5, lines 35-37; col. 8, lines 50-54, 63-67. Match particular customer to a particular agent.);

providing the web server with the asynchronous message, wherein the providing is performed by the business process server, the providing is performed in response to an incoming event (col. 5, lines 32-34; col. 9, lines 53-55. Receive request and initiate via path to permit interaction. Forward request.),

the asynchronous message corresponds to the incoming event, and the incoming event comprises a request to establish communication with a user (col. 9, lines 53-55. Send a support request.); and

asynchronously pushing the asynchronous message from the web server to the web browser via the first connection, wherein the asynchronous message causes the web browser to present a user interface

change, in response to the web browser receiving the asynchronous message (col. 6, lines 47-50).
Establish link between browsers. col. 9, lines 53-55. Send a support request to selected agent.).

Pell does not specifically teach the providing the wait request allows the web browser to perform a task other than awaiting receipt of the asynchronous message, at least during the period of time, and facilitates pushing the asynchronous message via the first connection. Pell teaches of pushing the asynchronous message but not specifically via the connection. Pell does not specifically teach the wait request specifies a target process of a plurality of processes, the processes are configured to generate asynchronous messages; the source of the asynchronous message is the target process.

Martin teaches establishing a persistent connection between a web browser and a web server, wherein the persistent connection is maintained for a period of time (Paragraph 0021, 0055. Permanent connection), wherein a request provided via the persistent connection allows the web browser to perform a task other than awaiting receipt of an asynchronous message; and wherein the request facilitates pushing the asynchronous message via the persistent connection (Paragraphs 0021, 0055. Client can perform other tasks until a notification is received.).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings for the connection between the web browser and a web server as taught by Pell to be a persistent connection, wherein the persistent connection is maintained for a period of time; to provide the wait request via the persistent connection that allows the web browser to perform a task other than awaiting receipt of an asynchronous message; and for the request to facilitate pushing the asynchronous message via the persistent connection. The motivation for the suggested combination is that Martin's teachings would improve Pell's teachings by allowing the web browser to perform multiple tasks, which would increase efficiency, and allowing the server to initiate messages to the client, especially when the client is behind a firewall.

Fisher teaches of a request that specifies a target process of a plurality of processes, and the processes are configured to generate asynchronous messages, wherein the source of the asynchronous message is the target process (col. 4, lines 43-48; col. 5, lines 18-22, 46-50; col. 14, lines 25-36; col. 15, lines 1-11, 21-27).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings for the wait request to specify a target process of a plurality of processes, and for the processes to be configured to generate asynchronous messages, wherein the source of the asynchronous message is the target process. The motivation for the suggested combination is that Fisher's teachings would improve the suggested system by enabling users to register for event notifications from specified sources while limiting the event notifications to authorized users.

As per claim 20, Pell teaches substantially the invention as claimed including a method comprising:

controlling a user interface presented by a web browser, comprising
establishing a connection between the web browser and a web server (col. 5, lines 9-10. Browser. col. 6, lines 18-21, 26-34. Connect to server.),

registering the web browser as available to receive an asynchronous message (col. 5, lines 40-45. Issue request to identify as available.),

causing the web browser to provide a wait request to the web server via the connection, wherein, the causing results in the web browser being ready to accept an asynchronous message from the web server (col. 8, lines 36-46. Request from agent, "log in" procedure. col. 5, lines 40-52; col. 7, lines 26-30. Identify available agent and initiate link with agent.),

the asynchronous message is asynchronously pushed from the web server, the wait request is associated with the web browser (col. 7, lines 17-19. Receive request.), and

the wait request facilitates pushing the asynchronous message from the web server to the web browser; identifying a source of the asynchronous message, associating the wait request with the source associating the wait request with the source, wherein the associating identifies the web browser as a recipient of the asynchronous message (col. 5, lines 35-37; col. 8, lines 50-54, 63-67. Match particular customer to a particular agent.); and

in response to the web server receiving an incoming event, asynchronously pushing the asynchronous message from the web server to the web browser (col. 7, lines 17-19, 25-31. Receive request. col. 9, lines 53-55. Send request from user to agent.), wherein

the incoming event comprises a request to establish communication with a user (col. 9, lines 53-55. Send a support request to selected agent.),

the incoming event is received by a communication server (col. 5, lines 21-26. Proxy receives request. col. 5, lines 32-35. Rendezvous service also receives request.),

the asynchronous message corresponds to the incoming event (col. 7, lines 17-19, 25-31. Receive request. col. 9, lines 53-55. Send request from user to agent.), and

the asynchronous message causes the web browser to present a user interface change in response to the web browser receiving the asynchronous message (col. 6, lines 47-50. Establish link between browsers. col. 9, lines 53-55. Send a support request to selected agent.).

Pell teaches of a connection between the web browser and a web server but does not specifically teach that the connection is a persistent connection, wherein the persistent connection is maintained for a period of time. Pell does not specifically teach the providing the wait request allows the web browser to perform a task other than awaiting receipt of the asynchronous message, at least during the period of time, and facilitates pushing the asynchronous message via the persistent connection. Pell teaches of pushing the asynchronous message but not specifically via the persistent connection. Pell does not specifically

teach the wait request specifies a target process of a plurality of processes, the processes are configured to generate asynchronous messages; and the source of the asynchronous message is the target process.

Martin teaches establishing a persistent connection between a web browser and a web server, wherein the persistent connection is maintained for a period of time (Paragraph 0021, 0055. Permanent connection), wherein a request provided via the persistent connection allows the web browser to perform a task other than awaiting receipt of an asynchronous message; and wherein the request facilitates pushing the asynchronous message via the persistent connection (Paragraphs 0021, 0055. Client can perform other tasks until a notification is received.).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings for the connection between the web browser and a web server as taught by Pell to be a persistent connection, wherein the persistent connection is maintained for a period of time; to provide the wait request via the persistent connection that allows the web browser to perform a task other than awaiting receipt of an asynchronous message; and for the request to facilitate pushing the asynchronous message via the persistent connection. The motivation for the suggested combination is that Martin's teachings would improve Pell's teachings by allowing the web browser to perform multiple tasks, which would increase efficiency, and allowing the server to initiate messages to the client, especially when the client is behind a firewall.

Fisher teaches of a request that specifies a target process of a plurality of processes, and the processes are configured to generate asynchronous messages, wherein the source of the asynchronous message is the target process (col. 4, lines 43-48; col. 5, lines 18-22, 46-50; col. 14, lines 25-36; col. 15, lines 1-11, 21-27).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings for the wait request to specify a target process of a plurality of processes, and for the processes to be configured to generate asynchronous messages, wherein the source of the

asynchronous message is the target process. The motivation for the suggested combination is that Fisher's teachings would improve the suggested system by enabling users to register for event notifications from specified sources while limiting the event notifications to authorized users.

As per claim 21, Pell teaches substantially the invention as claimed including a method comprising:

controlling a user interface presented by a web browser, comprising
establishing a connection between the web browser and a web server (col. 5, lines 9-10. Browser. col. 6, lines 18-21, 26-34. Connect to server.),

causing the web browser to provide a wait request to the web server via the connection, wherein, the causing results in the web browser being ready to accept an asynchronous message from the web server (col. 8, lines 36-46. Request from agent, "log in" procedure. col. 5, lines 40-52; col. 7, lines 26-30. Identify available agent and initiate link with agent.),

the asynchronous message is asynchronously pushed from the web server, the wait request is associated with the web browser (col. 7, lines 17-19. Receive request.), and

the wait request facilitates pushing the asynchronous message from the web server to the web browser; identifying a source of the asynchronous message, associating the wait request with the source associating the wait request with the source, wherein the associating identifies the web browser as a recipient of the asynchronous message (col. 5, lines 35-37; col. 8, lines 50-54, 63-67. Match particular customer to a particular agent.); and

in response to the web server receiving an incoming event, asynchronously pushing the asynchronous message from the web server to the web browser (col. 7, lines 17-19, 25-31. Receive request. col. 9, lines 53-55. Send request from user to agent.), wherein

the asynchronous message corresponds to the incoming event (col. 7, lines 17-19, 25-31. Receive request. col. 9, lines 53-55. Send request from user to agent.), and

the asynchronous message causes the web browser to present a user interface change in response to the web browser receiving the asynchronous message (col. 6, lines 47-50. Establish link between browsers. col. 9, lines 53-55. Send a support request to selected agent.);

the incoming event comprises a request to establish communication with a user (col. 9, lines 53-55. Send a support request to selected agent.),

the incoming event is received by a communication server (col. 5, lines 21-26. Proxy receives request. col. 5, lines 32-35. Rendezvous service also receives request.).

Pell teaches of a connection between the web browser and a web server but does not specifically teach that the connection is a persistent connection, wherein the persistent connection is maintained for a period of time. Pell does not specifically teach the providing the wait request allows the web browser to perform a task other than awaiting receipt of the asynchronous message, at least during the period of time, and facilitates pushing the asynchronous message via the persistent connection. Pell teaches of pushing the asynchronous message but not specifically via the persistent connection. Pell does not specifically teach the wait request specifies a target process of a plurality of processes, the processes are configured to generate asynchronous messages; and the source of the asynchronous message is the target process.

Martin teaches establishing a persistent connection between a web browser and a web server, wherein the persistent connection is maintained for a period of time (Paragraph 0021, 0055. Permanent connection), wherein a request provided via the persistent connection allows the web browser to perform a task other than awaiting receipt of an asynchronous message; and wherein the request facilitates pushing the asynchronous message via the persistent connection (Paragraphs 0021, 0055. Client can perform other tasks until a notification is received.).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings for the connection between the web browser and a web server as taught by Pell to be a persistent connection, wherein the persistent connection is maintained for a period of time; to provide the wait request via the persistent connection that allows the web browser to perform a task other than awaiting receipt of an asynchronous message; and for the request to facilitate pushing the asynchronous message via the persistent connection. The motivation for the suggested combination is that Martin's teachings would improve Pell's teachings by allowing the web browser to perform multiple tasks, which would increase efficiency, and allowing the server to initiate messages to the client, especially when the client is behind a firewall.

Fisher teaches of a request that specifies a target process of a plurality of processes, and the processes are configured to generate asynchronous messages, wherein the source of the asynchronous message is the target process (col. 4, lines 43-48; col. 5, lines 18-22, 46-50; col. 14, lines 25-36; col. 15, lines 1-11, 21-27).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings for the wait request to specify a target process of a plurality of processes, and for the processes to be configured to generate asynchronous messages, wherein the source of the asynchronous message is the target process. The motivation for the suggested combination is that Fisher's teachings would improve the suggested system by enabling users to register for event notifications from specified sources while limiting the event notifications to authorized users.

As per claim 22, Pell teaches substantially the invention as claimed including a method comprising:

controlling a user interface presented by a web browser, comprising establishing a connection between the web browser and a web server (col. 5, lines 9-10. Browser. col. 6, lines 18-21, 26-34.

Connect to server.),

causing the web browser to provide a wait request to the web server via the connection, wherein, the causing results in the web browser being ready to accept an asynchronous message from the web server (col. 8, lines 36-46. Request from agent, "log in" procedure. col. 5, lines 40-52; col. 7, lines 26-30. Identify available agent and initiate link with agent.),

the asynchronous message is asynchronously pushed from the web server, the wait request is associated with the web browser (col. 7, lines 17-19. Receive request.), and

the wait request facilitates pushing the asynchronous message from the web server to the web browser; identifying a source of the asynchronous message (col. 5, lines 35-37; col. 8, lines 50-54, 63-67. Match particular customer to a particular agent.),

generating the asynchronous message, the asynchronous message identifying the web browser as a recipient of the asynchronous message (col. 9, lines 53-55. Send a support request to selected agent.);

providing the asynchronous message to the web server (col. 5, lines 32-35, 46-50. Send request via path to permit interaction.); and

in response to the web server receiving an incoming event, asynchronously pushing the asynchronous message from the web server to the web browser (col. 7, lines 17-19, 25-31. Receive request. col. 9, lines 53-55. Send request from user to agent.), wherein

the asynchronous message corresponds to the incoming event (col. 7, lines 17-19, 25-31. Receive request. col. 9, lines 53-55. Send request from user to agent.),

the incoming event comprises a request to establish communication with a user (col. 9, lines 53-55. Send a support request to selected agent.),

the asynchronous message causes the web browser to present a user interface change in response to the web browser receiving the asynchronous message (col. 6, lines 47-50. Establish link between browsers. col. 9, lines 53-55. Send a support request to selected agent.);

the incoming event is received by a communication server (col. 5, lines 21-26. Proxy receives request. col. 5, lines 32-35. Rendezvous service also receives request.).

Pell teaches of a connection between the web browser and a web server but does not specifically teach that the connection is a persistent connection, wherein the persistent connection is maintained for a period of time. Pell does not specifically teach the providing the wait request allows the web browser to perform a task other than awaiting receipt of the asynchronous message, at least during the period of time, and facilitates pushing the asynchronous message via the persistent connection. Pell teaches of pushing the asynchronous message but not specifically via the persistent connection. Pell does not specifically teach the wait request specifies a target process of a plurality of processes, the processes are configured to generate asynchronous messages; the source of the asynchronous message is the target process; and the generating being performed by the target.

Martin teaches establishing a persistent connection between a web browser and a web server, wherein the persistent connection is maintained for a period of time (Paragraph 0021, 0055. Permanent connection), wherein a request provided via the persistent connection allows the web browser to perform a task other than awaiting receipt of an asynchronous message; and wherein the request facilitates pushing the asynchronous message via the persistent connection (Paragraphs 0021, 0055. Client can perform other tasks until a notification is received.).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings for the connection between the web browser and a web server as taught by Pell to be a persistent connection, wherein the persistent connection is maintained for a period of time; to provide the wait request via the persistent connection that allows the web browser to perform a task other

than awaiting receipt of an asynchronous message; and for the request to facilitate pushing the asynchronous message via the persistent connection. The motivation for the suggested combination is that Martin's teachings would improve Pell's teachings by allowing the web browser to perform multiple tasks, which would increase efficiency, and allowing the server to initiate messages to the client, especially when the client is behind a firewall.

Fisher teaches of a request that specifies a target process of a plurality of processes, and the processes are configured to generate asynchronous messages, wherein the source of the asynchronous message is the target process and the generating is performed by the target. (col. 4, lines 43-48; col. 5, lines 18-22, 46-50; col. 14, lines 25-36; col. 15, lines 1-11, 21-27).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings for the wait request to specify a target process of a plurality of processes, and for the processes to be configured to generate asynchronous messages, wherein the source of the asynchronous message is the target process and the generating is performed by the target. The motivation for the suggested combination is that Fisher's teachings would improve the suggested system by enabling users to register for event notifications from specified sources while limiting the event notifications to authorized users.

As per claim 23, Pell teaches substantially the invention as claimed including a computer program product comprising:

controlling instructions to control a user interface presented by a web browser, comprising
establishing instructions to cause a web server to establish a connection between the web browser and the web server (col. 5, lines 9-10. Browser. col. 6, lines 18-21, 26-34. Connect to server.),
providing instructions to cause the web browser to provide a wait request to the web server via the connection, wherein the causing results in the web browser being ready to accept an asynchronous

message from the web server (col. 8, lines 36-46. Request from agent, “log in” procedure. col. 5, lines 40-52; col. 7, lines 26-30. Identify available agent and initiate link with agent.),

the asynchronous message is asynchronously pushed from the web server, the wait request is associated with the web browser (col. 7, lines 17-19. Receive request.), and

the wait request facilitates pushing the asynchronous message from the web server to the web browser (col. 5, lines 40-45. Issue request to identify as available.);

identifying instructions to identify a source of the asynchronous message (col. 5, lines 35-37; col. 8, lines 50-54, 63-67. Match particular customer to a particular agent.),

associating instructions to associate the wait request with the source wherein the associating identifies web browser as a recipient of the asynchronous message (col. 5, lines 35-37, col. 8, lines 50-54, 63-67. Match particular customer to a particular agent.);

pushing instructions to cause a web server to asynchronously pushing the asynchronous message from the web server to the web browser in response an incoming event (col. 7, lines 17-19, 25-31. Receive request. col. 9, lines 53-55. Send request from user to agent.), wherein

the asynchronous message corresponds to the incoming event (col. 7, lines 17-19, 25-31. Receive request. col. 9, lines 53-55. Send request from user to agent.),

the asynchronous message causes the web browser to present a user interface change in response to the web browser receiving the asynchronous message (col. 6, lines 47-50. Establish link between browsers. col. 9, lines 53-55. Send a support request to selected agent.);

the incoming event comprises a request to establish communication with a user (col. 9, lines 53-55. Send a support request to selected agent.),

the incoming event is received by a communication server (col. 5, lines 21-26. Proxy receives request. col. 5, lines 32-35. Rendezvous service also receives request.); and

a non-transitory computer-readable storage medium for storing the controlling instructions, the establishing instructions, the providing instructions, the identifying instructions, the associating instructions, and the pushing instructions (fig. 8; col. 4, lines 55-67; col. 5, lines 4-15. Physical server system comprising data for initiating communications.).

Pell teaches of a connection between the web browser and a web server but does not specifically teach that the connection is a persistent connection, wherein the persistent connection is maintained for a period of time. Pell does not specifically teach the providing the wait request allows the web browser to perform a task other than awaiting receipt of the asynchronous message, at least during the period of time, and facilitates pushing the asynchronous message via the persistent connection. Pell teaches of pushing the asynchronous message but not specifically via the persistent connection. Pell does not specifically teach the wait request specifies a target process of a plurality of processes, the processes are configured to generate asynchronous messages; the source of the asynchronous message is the target process; and the generating being performed by the target.

Martin teaches establishing a persistent connection between a web browser and a web server, wherein the persistent connection is maintained for a period of time (Paragraph 0021, 0055. Permanent connection), wherein a request provided via the persistent connection allows the web browser to perform a task other than awaiting receipt of an asynchronous message; and wherein the request facilitates pushing the asynchronous message via the persistent connection (Paragraphs 0021, 0055. Client can perform other tasks until a notification is received.).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings for the connection between the web browser and a web server as taught by Pell to be a persistent connection, wherein the persistent connection is maintained for a period of time; to provide the wait request via the persistent connection that allows the web browser to perform a task other than awaiting receipt of an asynchronous message; and for the request to facilitate pushing the

asynchronous message via the persistent connection. The motivation for the suggested combination is that Martin's teachings would improve Pell's teachings by allowing the web browser to perform multiple tasks, which would increase efficiency, and allowing the server to initiate messages to the client, especially when the client is behind a firewall.

Fisher teaches of a request that specifies a target process of a plurality of processes, and the processes are configured to generate asynchronous messages, wherein the source of the asynchronous message is the target process and the generating is performed by the target. (col. 4, lines 43-48; col. 5, lines 18-22, 46-50; col. 14, lines 25-36; col. 15, lines 1-11, 21-27).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings for the wait request to specify a target process of a plurality of processes, and for the processes to be configured to generate asynchronous messages, wherein the source of the asynchronous message is the target process and the generating is performed by the target. The motivation for the suggested combination is that Fisher's teachings would improve the suggested system by enabling users to register for event notifications from specified sources while limiting the event notifications to authorized users.

As per claim 33, Pell teaches substantially the invention as claimed including a computer program product comprising:

controlling instructions to control a user interface presented by a web browser, comprising
establishing instructions to establish a connection between the web browser and the web server
(col. 5, lines 9-10. Browser. col. 6, lines 18-21, 26-34. Connect to server.),
registering instructions to register the web browser as available to receive an asynchronous
message (col. 5, lines 40-45. Issue request to identify as available.),

providing instructions to cause the web browser to provide a wait request to the web server via the connection, wherein the causing results in the web browser being ready to accept an asynchronous message from the web server (col. 8, lines 36-46. Request from agent, “log in” procedure. col. 5, lines 40-52; col. 7, lines 26-30. Identify available agent and initiate link with agent.),

the asynchronous message is asynchronously pushed from the web server, the wait request is associated with the web browser (col. 7, lines 17-19. Receive request.), and

the wait request facilitates pushing the asynchronous message from the web server to the web browser (col. 5, lines 40-45. Issue request to identify as available.);

identifying instructions to identify a source of the asynchronous message (col. 5, lines 35-37; col. 8, lines 50-54, 63-67. Match particular customer to a particular agent.),

associating instructions to associate the wait request with the source wherein the associating identifies web browser as a recipient of the asynchronous message (col. 5, lines 35-37, col. 8, lines 50-54, 63-67. Match particular customer to a particular agent.);

pushing instructions to cause a web server to asynchronously pushing the asynchronous message from the web server to the web browser in response an incoming event (col. 7, lines 17-19, 25-31. Receive request. col. 9, lines 53-55. Send request from user to agent.), wherein

the asynchronous message corresponds to the incoming event (col. 7, lines 17-19, 25-31. Receive request. col. 9, lines 53-55. Send request from user to agent.),

the asynchronous message causes the web browser to present a user interface change in response to the web browser receiving the asynchronous message (col. 6, lines 47-50. Establish link between browsers. col. 9, lines 53-55. Send a support request to selected agent.);

the incoming event comprises a request to establish communication with a user (col. 9, lines 53-55. Send a support request to selected agent.),

the incoming event is received by a communication server (col. 5, lines 21-26. Proxy receives request. col. 5, lines 32-35. Rendezvous service also receives request.); and

a non-transitory computer-readable storage medium for storing the controlling instructions, the establishing instructions, the providing instructions, the identifying instructions, the associating instructions, and the pushing instructions (fig. 8; col. 4, lines 55-67; col. 5, lines 4-15. Physical server system comprising data for initiating communications.).

Pell teaches of a connection between the web browser and a web server but does not specifically teach that the connection is a persistent connection, wherein the persistent connection is maintained for a period of time. Pell does not specifically teach the providing the wait request allows the web browser to perform a task other than awaiting receipt of the asynchronous message, at least during the period of time, and facilitates pushing the asynchronous message via the persistent connection. Pell teaches of pushing the asynchronous message but not specifically via the persistent connection. Pell does not specifically teach the wait request specifies a target process of a plurality of processes, the processes are configured to generate asynchronous messages; the source of the asynchronous message is the target process; and the generating being performed by the target.

Martin teaches establishing a persistent connection between a web browser and a web server, wherein the persistent connection is maintained for a period of time (Paragraph 0021, 0055. Permanent connection), wherein a request provided via the persistent connection allows the web browser to perform a task other than awaiting receipt of an asynchronous message; and wherein the request facilitates pushing the asynchronous message via the persistent connection (Paragraphs 0021, 0055. Client can perform other tasks until a notification is received.).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings for the connection between the web browser and a web server as taught by Pell to be a persistent connection, wherein the persistent connection is maintained for a period of time; to

provide the wait request via the persistent connection that allows the web browser to perform a task other than awaiting receipt of an asynchronous message; and for the request to facilitate pushing the asynchronous message via the persistent connection. The motivation for the suggested combination is that Martin's teachings would improve Pell's teachings by allowing the web browser to perform multiple tasks, which would increase efficiency, and allowing the server to initiate messages to the client, especially when the client is behind a firewall.

Fisher teaches of a request that specifies a target process of a plurality of processes, and the processes are configured to generate asynchronous messages, wherein the source of the asynchronous message is the target process and the generating is performed by the target. (col. 4, lines 43-48; col. 5, lines 18-22, 46-50; col. 14, lines 25-36; col. 15, lines 1-11, 21-27).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings for the wait request to specify a target process of a plurality of processes, and for the processes to be configured to generate asynchronous messages, wherein the source of the asynchronous message is the target process and the generating is performed by the target. The motivation for the suggested combination is that Fisher's teachings would improve the suggested system by enabling users to register for event notifications from specified sources while limiting the event notifications to authorized users.

As per claim 34, Pell teaches substantially the invention as claimed including a computer system comprising:

a processor; a memory, the memory storing instructions for executing on the processor (fig. 8; col. 4, lines 55-67; col. 5, lines 4-15. Physical server system comprising data for initiating communications.). The rest of claim 34's limitations including the instructions are claimed in claim 33 and are rejected for same rational.

As per claim 44, Pell teaches substantially the invention as claimed including a computer system comprising:

a processor; a memory, the memory storing instructions for executing on the processor (fig. 8; col. 4, lines 55-67; col. 5, lines 4-15. Physical server system comprising data for initiating communications.), the instructions comprising: (The rest of claim 44's limitations including the instructions are recited in claim 33 and are rejected for same rational.).

As per claim 45, Pell teaches substantially the invention as claimed including a system comprising:

a client computer comprising:

a web browser, wherein the web browser presents a user interface (col. 6, lines 47-50. Establish link between browsers. col. 9, lines 53-55. Send a support request to selected agent.);

a web server computer coupled to the client computer, wherein the web server computer comprises

controlling means for controlling the user interface presented by the web browser (col. 6, lines 47-50. Establish link between browsers. col. 9, lines 53-55. Send a support request to selected agent.),

establishing means for establishing a connection between the web browser and the web server, wherein the connection is maintained for a period of time (col. 5, lines 9-10. Browser. col. 6, lines 18-21, 26-34. Connect to server.);

identifying means for identifying a source of the asynchronous message, associating means for associating a wait request with the source, wherein the associating identifies the web browser as a recipient of the asynchronous message (col. 5, lines 35-37; col. 8, lines 50-54, 63-67. Match particular customer to a particular agent.), and

pushing means for causing the web server to asynchronously push the asynchronous message from the web server to the web browser, in response to an incoming event wherein the asynchronous message corresponds to the incoming event, and the asynchronous message causes the web browser to present a user interface change, in response to the web browser receiving the asynchronous message, the incoming event comprises a request to establish communication with a user, the incoming event is received by a communication server (col. 7, lines 17-19, 25-31. Receive request. col. 9, lines 53-55. Send request from user to agent.),

the client computer comprises
providing means for causing the web browser to provide the wait request to the web server via the persistent connection (col. 8, lines 36-46. Request from agent, "log in" procedure. col. 5, lines 40-52; col. 7, lines 26-30. Identify available agent and initiate link with agent.),

wherein, the causing results in the web browser being ready to accept an asynchronous message from the server, the asynchronous message is asynchronously pushed from the web server, the wait request is associated with the web browser (col. 6, lines 47-50. Establish link between browsers. col. 9, lines 53-55. Receive a support request.).

Pell teaches of a connection between the web browser and a web server but does not specifically teach that the connection is a persistent connection, wherein the persistent connection is maintained for a period of time. Pell does not specifically teach the providing the wait request allows the web browser to perform a task other than awaiting receipt of the asynchronous message, at least during the period of time, and facilitates pushing the asynchronous message via the persistent connection. Pell teaches of pushing the asynchronous message but not specifically via the persistent connection. Pell does not specifically teach wherein the source of the asynchronous message is a target process of a plurality of processes, and the processes are configured to generate asynchronous messages and the wait request specifies the target process.

Martin teaches establishing a persistent connection between a web browser and a web server, wherein the persistent connection is maintained for a period of time (Paragraph 0021, 0055. Permanent connection), wherein a request provided via the persistent connection allows the web browser to perform a task other than awaiting receipt of an asynchronous message; and wherein the request facilitates pushing the asynchronous message via the persistent connection (Paragraphs 0021, 0055. Client can perform other tasks until a notification is received.).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings for the connection between the web browser and a web server as taught by Pell to be a persistent connection, wherein the persistent connection is maintained for a period of time; to provide the wait request via the persistent connection that allows the web browser to perform a task other than awaiting receipt of an asynchronous message; and for the request to facilitate pushing the asynchronous message via the persistent connection. The motivation for the suggested combination is that Martin's teachings would improve Pell's teachings by allowing the web browser to perform multiple tasks, which would increase efficiency, and allowing the server to initiate messages to the client, especially when the client is behind a firewall.

Fisher teaches of a request that specifies a target process of a plurality of processes, and the processes are configured to generate asynchronous messages, wherein the source of the asynchronous message is the target process (col. 4, lines 43-48; col. 5, lines 18-22, 46-50; col. 14, lines 25-36; col. 15, lines 1-11, 21-27).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings for the wait request to specify a target process of a plurality of processes, and for the processes to be configured to generate asynchronous messages, wherein the source of the asynchronous message is the target process. The motivation for the suggested combination is that

Fisher's teachings would improve the suggested system by enabling users to register for event notifications from specified sources while limiting the event notifications to authorized users.

As per claim 55, Pell teaches substantially the invention as claimed including a system comprising:

a client computer comprising:

a web browser, wherein the web browser presents a user interface (col. 6, lines 47-50. Establish link between browsers. col. 9, lines 53-55. Send a support request to selected agent.);

a web server computer coupled to the client computer, wherein the web server computer comprises

controlling means for controlling the user interface presented by the web browser (col. 6, lines 47-50. Establish link between browsers. col. 9, lines 53-55. Send a support request to selected agent.);

establishing means for establishing a connection between the web browser and the web server, wherein the connection is maintained for a period of time (col. 5, lines 9-10. Browser. col. 6, lines 18-21, 26-34. Connect to server.);

registering means for registering the web browser as available to receive an asynchronous message (col. 5, lines 40-45. Issue request to identify as available.);

identifying means for identifying a source of the asynchronous message, associating means for associating a wait request with the source, wherein the associating identifies the web browser as a recipient of the asynchronous message (col. 5, lines 35-37; col. 8, lines 50-54, 63-67. Match particular customer to a particular agent.), and

pushing means for causing the web server to asynchronously push the asynchronous message from the web server to the web browser, in response to an incoming event wherein the asynchronous message corresponds to the incoming event, and the asynchronous message causes the web browser to

present a user interface change, in response to the web browser receiving the asynchronous message (col. 7, lines 17-19, 25-31. Receive request. col. 9, lines 53-55. Send request from user to agent.),

the client computer comprises

providing means for causing the web browser to provide the wait request to the web server via the persistent connection (col. 8, lines 36-46. Request from agent, "log in" procedure. col. 5, lines 40-52; col. 7, lines 26-30. Identify available agent and initiate link with agent.),

wherein, the causing results in the web browser being ready to accept an asynchronous message from the server, the asynchronous message is asynchronously pushed from the web server, the wait request is associated with the web browser (col. 6, lines 47-50. Establish link between browsers. col. 9, lines 53-55. Receive a support request.).

Pell teaches of a connection between the web browser and a web server but does not specifically teach that the connection is a persistent connection, wherein the persistent connection is maintained for a period of time. Pell does not specifically teach the providing the wait request allows the web browser to perform a task other than awaiting receipt of the asynchronous message, at least during the period of time, and facilitates pushing the asynchronous message via the persistent connection. Pell teaches of pushing the asynchronous message but not specifically via the persistent connection. Pell does not specifically teach wherein the source of the asynchronous message is a target process of a plurality of processes, and the processes are configured to generate asynchronous messages and the wait request specifies the target process.

Martin teaches establishing a persistent connection between a web browser and a web server, wherein the persistent connection is maintained for a period of time (Paragraph 0021, 0055. Permanent connection), wherein a request provided via the persistent connection allows the web browser to perform a task other than awaiting receipt of an asynchronous message; and wherein the request facilitates pushing

the asynchronous message via the persistent connection (Paragraphs 0021, 0055. Client can perform other tasks until a notification is received.).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings for the connection between the web browser and a web server as taught by Pell to be a persistent connection, wherein the persistent connection is maintained for a period of time; to provide the wait request via the persistent connection that allows the web browser to perform a task other than awaiting receipt of an asynchronous message; and for the request to facilitate pushing the asynchronous message via the persistent connection. The motivation for the suggested combination is that Martin's teachings would improve Pell's teachings by allowing the web browser to perform multiple tasks, which would increase efficiency, and allowing the server to initiate messages to the client, especially when the client is behind a firewall.

Fisher teaches of a request that specifies a target process of a plurality of processes, and the processes are configured to generate asynchronous messages, wherein the source of the asynchronous message is the target process (col. 4, lines 43-48; col. 5, lines 18-22, 46-50; col. 14, lines 25-36; col. 15, lines 1-11, 21-27).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings for the wait request to specify a target process of a plurality of processes, and for the processes to be configured to generate asynchronous messages, wherein the source of the asynchronous message is the target process. The motivation for the suggested combination is that Fisher's teachings would improve the suggested system by enabling users to register for event notifications from specified sources while limiting the event notifications to authorized users.

As per claim 58, the claim recites substantially the same subject matter as claim 23 and thus is rejected for the same reasons.

As per claim 6, Pell, Martin, and Fisher teach the method of claim 1. Pell teaches the method further comprising: generating instructions to generate the asynchronous message, the asynchronous message identifying the wait request, wherein the identifying identifies the web browser as a recipient of the message (col. 5, lines 35-37, col. 8, lines 50-54, 63-67. Match particular customer to a particular agent. col. 9, lines 53-55. Send a support request to selected agent.); and message providing instructions to provide the asynchronous message to the web server (col. 5, lines 46-50. Initiate via path to permit interaction).

As per claim 8, Pell, Martin, and Fisher teach the method of claim 6. Pell teaches the method further comprising: storing a reference to a callback function with information from the wait request (col. 5, lines 40-45. Log in with request. col. 8, lines 43-49. Record agent as available.); and using the reference to call the callback function when the message is provided to the web server, wherein the callback function pushes the message (col. 9, lines 53-55. Send a support request to selected agent.).

As per claim 9, Pell, Martin, and Fisher teach the method of claim 8. Pell teaches the method further comprising: providing the callback function with context information, the context information identifying the web browser (col. 5, lines 40-45. Log in with request. col. 8, lines 43-49. Record agent as available. col. 4, lines 43-54. Interaction using browser. col. 6, lines 47-50. Establish link between browsers.).

As per claim 10, Pell, Martin, and Fisher teach the method of claim 6. Pell teaches the method further comprising: assigning instructions to assign the wait request to a connection between the web server and a business process server; and listening instructions to listen to the connection for the message

(col. 5, lines 46-50. Initiate via path to permit interaction. col. 9, lines 53-55. Send a support request to selected agent.).

As per claim 11, Pell, Martin, and Fisher teach the method of claim 6. Pell teaches the method further comprising: assigning instructions to assign the wait request to a session between the web server and a business process server, the session being associated with a connection; and listening instructions to listen to the connection for the message (col. 5, lines 46-50. Initiate via path to permit interaction. col. 9, lines 53-55. Send a support request to selected agent.).

As per claim 12, Pell, Martin, and Fisher teach the method of claim 1. Pell teaches the method further comprising: calling a callback function associated with the web browser when the message is received, wherein the callback function pushes the message (col. 5, lines 40-45. Log in with request. col. 8, lines 43-49. Record agent as available. col. 7, lines 17-19. Receive request for support or services. col. 9, lines 53-55. Send a support request to selected agent.).

As per claim 13, Pell, Martin, and Fisher teach the method of claim 12. Pell teaches the method further comprising: storing a reference to the callback function and using the reference for calling the callback function (col. 5, lines 40-45. Log in with request. col. 8, lines 43-49. Record agent as available. col. 7, lines 17-19. Receive request for support or services. col. 9, lines 53-55. Send a support request to selected agent.).

As per claim 25, Pell, Martin, and Fisher teach the computer program product of claim 23. Pell teaches the product further comprising: request providing instructions to cause the web browser to provide a wait request to the web server, the wait request being associated with the web browser (col. 8,

lines 36-46. Request from agent. “log in” procedure. col. 5, lines 40-52; col. 7, lines 26-30. Identify available agent.); generating instructions to generate the asynchronous message, the asynchronous message identifying the wait request, wherein the identifying identifies the web browser as a recipient of the message; and message providing instructions to provide the asynchronous message to the web server, wherein the non-transitory computer readable-storage medium further stores the request providing instructions, the generating instructions, and the message providing instructions (col. 7, lines 17-19. Receive request for support or services. col. 9, lines 53-55. Send a support request to selected agent.).

As per claim 26, Pell, Martin, and Fisher teach the computer program product of claim 25. Pell teaches the product further comprising: storing instructions to store a reference to a callback function with information from the wait request (col. 5, lines 40-45. Log in with request. col. 8, lines 43-49. Record agent as available.); and using instructions to use the reference to call the callback function when the message is provided to the web server, wherein the callback function pushes the message; wherein the non-transitory computer readable-storage medium further stores the storing instructions and the using instructions (col. 9, lines 53-55. Send a support request to selected agent.).

As per claim 27, Pell, Martin, and Fisher teach the computer program product of claim 26. Pell teaches the product comprising: context providing instructions to provide the callback function with context information, the context information identifying the web browser; wherein the non-transitory computer readable-storage medium further stores the context providing instructions (col. 5, lines 40-45. Log in with request. col. 8, lines 43-49. Record agent as available. col. 4, lines 43-54. Interaction/communication using browser. col. 6, lines 47-50. Establish link between browsers.).

As per claim 28, Pell, Martin, and Fisher teach the computer program product of claim 25. Pell teaches the product comprising: assigning instructions to assign the wait request to a connection between the web server and a business process server; and listening instructions to listen to the connection for the message; wherein the non-transitory computer readable-storage medium further stores the assigning instructions and the listening instructions (col. 5, lines 46-50. Initiate via path to permit interaction. col. 9, lines 53-55. Send a support request to selected agent.).

As per claim 29, Pell, Martin, and Fisher teach the computer program product of claim 23. Pell teaches wherein the pushing instructions comprise: calling instructions to call a callback function associated with the web browser when the message is received, wherein the callback function pushes the message; and the non-transitory computer readable-storage medium further stores the calling instructions (col. 5, lines 40-45. Log in with request. col. 8, lines 43-49. Record agent as available. col. 7, lines 17-19. Receive request for support or services. col. 9, lines 53-55. Send a support request to selected agent.).

As per claim 30, Pell, Martin, and Fisher teach the computer program product of claim 29. Pell teaches the product comprising: reference storing instructions to store a reference to the callback function and reference using instructions to use the reference for calling the callback function; wherein the non-transitory computer readable-storage medium further stores the reference storing instructions and the reference using instructions (col. 5, lines 40-45. Log in with request. col. 8, lines 43-49. Record agent as available. col. 7, lines 17-19. Receive request for support or services. col. 9, lines 53-55. Send a support request to selected agent.).

As per claim 36, Pell, Martin, and Fisher teach the computer system claim 34. Pell teaches wherein the instructions further comprise: request providing instructions to cause the web browser to provide a wait request to the web server, the wait request being associated with the web browser (col. 8, lines 36-46. Request from agent. “log in” procedure. col. 5, lines 40-52; col. 7, lines 26-30. Identify available agent.); generating instructions to generate the asynchronous message, the asynchronous message identifying the wait request, wherein the identifying identifies the web browser as a recipient of the message; and message providing instructions to provide the asynchronous message to the web server (col. 7, lines 17-19. Receive request for support or services. col. 9, lines 53-55. Send a support request to selected agent.).

As per claim 37, Pell, Martin, and Fisher teach the computer system of claim 36. Pell teaches wherein the instructions further comprise: storing instructions to store a reference to a callback function with information from the wait request (col. 5, lines 40-45. Log in with request. col. 8, lines 43-49. Record agent as available.); and using instructions to use the reference to call the callback function when the message is provided to the web server, wherein the callback function pushes the message (col. 9, lines 53-55. Send a support request to selected agent.).

As per claim 38, Pell, Martin, and Fisher teach the computer system of claim 37. Pell teaches wherein the instructions further comprise: context providing instructions to provide the callback function with context information, the context information identifying the web browser (col. 5, lines 40-45. Log in with request. col. 8, lines 43-49. Record agent as available. col. 4, lines 43-54. Interaction/communication using browser. col. 6, lines 47-50. Establish link between browsers.).

As per claim 39 Pell, Martin, and Fisher teach the computer system of claim 36. Pell teaches wherein the instructions further comprise: assigning instructions to assign the wait request to a connection between the web server and a business process server; and listening instructions to listen to the connection for the message (col. 5, lines 46-50. Initiate via path to permit interaction. col. 9, lines 53-55. Send a support request to selected agent.).

As per claim 40, Pell, Martin, and Fisher teach the computer system of claim 34. Pell teaches wherein the pushing instructions further comprise: calling instructions to call a callback function associated with the web browser when the message is received, wherein the callback function pushes the message (col. 5, lines 40-45. Log in with request. col. 8, lines 43-49. Record agent as available. col. 7, lines 17-19. Receive request for support or services. col. 9, lines 53-55. Send a support request to selected agent.).

As per claim 41, Pell, Martin, and Fisher teach the computer system of claim 40. Pell teaches wherein the instructions further comprise: reference storing instructions to store a reference to the callback function and reference using instructions to use the reference for calling the callback function (col. 5, lines 40-45. Log in with request. col. 8, lines 43-49. Record agent as available. col. 7, lines 17-19. Receive request for support or services. col. 9, lines 53-55. Send a support request to selected agent.).

As per claim 47, Pell, Martin, and Fisher teach the system of claim 45. Pell teaches the web server computer, further comprising: generating means for generating the asynchronous message, the asynchronous message identifying the wait request, wherein the identifying identifies the web browser as a recipient of the message (col. 5, lines 35-37, col. 8, lines 50-54, 63-67. Match particular customer to a

particular agent.); and message providing means for providing the asynchronous message to the web server (col. 9, lines 53-55. Send a support request to selected agent col. 5, lines 46-50. Initiate via path to permit interaction).

As per claim 48, Pell, Martin, and Fisher teach the system of claim 47. Pell teaches the web server computer further comprising: storing means for storing a reference to a callback function with information from the wait request (col. 5, lines 40-45. Log in with request. col. 8, lines 43-49. Record agent as available.); and using means for using the reference to call the callback function when the message is provided to the web server, wherein the callback function pushes the message (col. 7, lines 17-19. Receive request for support or services. col. 9, lines 53-55. Send a support request to selected agent. col. 5, lines 46-50. Initiate via path to permit interaction.).

As per claim 49, Pell, Martin, and Fisher teach the system of claim 48. Pell teaches the client computer further comprising: context providing means for providing the callback function with context information, the context information identifying the web browser (col. 5, lines 40-45. Log in with request. col. 8, lines 43-49. Record agent as available.).

As per claim 50, Pell, Martin, and Fisher teach the system of claim 47. Pell teaches the server computer comprising: assigning means for assigning the wait request to a connection between the web server and a business process server; and listening means for listening to the connection for the message (col. 5, lines 46-50. Initiate via path to permit interaction. col. 9, lines 53-55. Send a support request to selected agent.).

As per claim 51, Pell, Martin, and Fisher teach the system of claim 45. Pell teaches wherein the pushing means comprise: calling means for calling a callback function associated with the web browser when the message is received, wherein the callback function pushes the message (col. 5, lines 40-45. Log in with request. col. 8, lines 43-49. Record agent as available. col. 7, lines 17-19. Receive request for support or services. col. 9, lines 53-55. Send a support request to selected agent.).

As per claim 52, Pell, Martin, and Fisher teach the system of claim 51. Pell teaches the web server computer comprising: reference storing means for storing a reference to the callback function and reference using means for using the reference for calling the callback function (col. 5, lines 40-45. Log in with request. col. 8, lines 43-49. Record agent as available. col. 7, lines 17-19. Receive request for support or services. col. 9, lines 53-55. Send a support request to selected agent.);

As per claim 60, Pell, Martin, and Fisher teach the system of claim 58. Pell teaches the system further comprising: a generating means to generate the asynchronous message, the asynchronous message identifying the wait request, wherein the identifying identifies the web browser as a recipient of the message (col. 5, lines 35-37, col. 8, lines 50-54, 63-67. Match particular customer to a particular agent.); and a message providing module to provide the asynchronous message to the web server, wherein the non-transitory computer readable storage medium is configured to store the generating module and message providing module (col. 9, lines 53-55. Send a support request to selected agent col. 5, lines 46-50. Initiate via path to permit interaction).

As per claim 61, Pell, Martin, and Fisher teach the system of claim 60. Pell teaches the system further comprising: a storing module to store a reference to a callback function with information from the wait request (col. 5, lines 40-45. Log in with request. col. 8, lines 43-49. Record agent as available.);

and a using module to use the reference to call the callback function when the message is provided to the web server, wherein the callback function pushes the message, wherein the non-transitory computer readable storage medium is configured to store the storing module and using module (col. 7, lines 17-19. Receive request for support or services. col. 9, lines 53-55. Send a support request to selected agent. col. 5, lines 46-50. Initiate via path to permit interaction.).

As per claim 62, Pell, Martin, and Fisher teach the system of claim 61. Pell teaches the system further comprising: a context providing module to provide the callback function with context information, the context information identifying the web browser, wherein the non-transitory computer readable storage medium is configured to store the context providing module (col. 5, lines 40-45. Log in with request. col. 8, lines 43-49. Record agent as available.).

As per claim 63, Pell, Martin, and Fisher teach the system of claim 60. Pell teaches the system further comprising: an assigning module to assign the wait request to a connection between the web server and a business process server; and listening module to listen to the connection for the message, wherein the non-transitory computer readable storage medium is configured to store the assigning module and listening module (col. 5, lines 46-50. Initiate via path to permit interaction. col. 9, lines 53-55. Send a support request to selected agent.).

As per claim 64, Pell, Martin, and Fisher teach the system of claim 58. Pell teaches wherein the pushing means comprise: a calling module to call a callback function associated with the web browser when the message is received, wherein the callback function pushes the message, wherein the computer readable storage medium is configured to store the calling module (col. 5, lines 40-45. Log in with

request. col. 8, lines 43-49. Record agent as available. col. 7, lines 17-19. Receive request for support or services. col. 9, lines 53-55. Send a support request to selected agent).

As per claim 65, Pell, Martin, and Fisher teach the system of claim 64. Pell teaches the system further comprising: a reference storing module to store a reference to the callback function and a reference using module to use the reference for calling the callback function, wherein the non-transitory computer readable storage medium is configured to store the reference storing module and the reference using module (col. 5, lines 40-45. Log in with request. col. 8, lines 43-49. Record agent as available. col. 7, lines 17-19. Receive request for support or services. col. 9, lines 53-55. Send a support request to selected agent.).

As per claim 68, Pell does not specifically teach the method of claim 1, wherein the persistent connection comprises a hypertext transfer protocol (HTTP) connection between the web browser and the web server when a user logs in.

Martin teaches of a persistent connection comprising a hypertext transfer protocol (HTTP) connection between the web browser and the web server when a user logs in (Paragraphs 0021, 0052, 0055).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings for the persistent connection to comprise a hypertext transfer protocol (HTTP) connection between the web browser and the web server when a user logs in. The motivation for the suggested combination is that Martin's teachings would improve Pell's teachings by allowing the web browser to perform multiple tasks and allowing the server to initiate messages to the client, especially when the client is behind a firewall.

As per claim 71, Pell does not specifically teach the method of claim 1, wherein the persistent connection persistent after the asynchronous message is asynchronously pushed to the web browser.

Martin teaches of a persistent connection persisting after an asynchronous message is asynchronously pushed to a web browser (Paragraphs 0052, 0055. Messages sent over connection, i.e. more than one message sent.)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings for the persistent connection to persist after the asynchronous message is asynchronously pushed to the web browser. The motivation for the suggested combination is that Martin's teachings would improve the suggested system by allowing the browser to continually receive notifications regarding a status on the server.

Claims 7, 14-15, 31-32, 42-43, 53-54, 66-67, and 70 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pell, in view of Martin, Fisher, and Gupta et al, US Patent No. 6,763,384 (Gupta hereinafter).

As per claim 7, Pell does not specifically teach the method of claim 6, wherein causing the web browser to provide the wait request comprises: downloading requesting instructions to the web browser, wherein downloading causes the web browser to execute the requesting instructions.

Gupta teaches an invention comprising of causing a browser to provide a wait request, wherein causing the web browser to provide the wait request comprises: downloading requesting instructions to the web browser, wherein downloading causes the web browser to execute the requesting instructions (col. 5, lines 60-col. 6, lines 9).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings to download requesting instructions to the web browser, wherein downloading causes the web browser to execute the requesting instructions. The motivation for the suggested

combination is that Gupta's teachings would improve the suggested system by providing a client with necessary software to interact with a server. Furthermore, Gupta's teachings would also provide an improvement by efficiently utilizing resources on the network (col. 12, lines 20-24).

As per claim 14, Pell does not specifically teach the method of claim 13 comprising: storing a second reference to context information, the context information identifying the web browser and using the second reference for providing the context information to the callback function.

Gupta teaches an invention for providing notifications comprising of storing a second reference to context information, the context information identifying the web browser and using the second reference for providing the context information to the callback function (col. 5, lines 54-56. Identifier could be address and port with the protocol. col. 8, lines 34-40. Send events/messages received from application server using receiving identifier of client.).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings to store a second reference to context information, the context information identifying the web browser and use the second reference for providing the context information to the callback function. The motivation for the suggested combination is that Gupta's teachings would improve the suggested system by providing specific information to enable communication with a client. Furthermore, Gupta's teachings would also provide an improvement by efficiently utilizing resources on the network (col. 12, lines 20-24).

As per claim 15, Pell does not specifically teach the method of claim 1 wherein the change in the user interface comprises at least one of a group consisting of the following: causing a first user interface object to move to visually capture a user's attention; causing a second user interface object to issue a

sound to capture the user's attention; presenting a screen pop of data; and bringing a web browser window to the front of a screen

Gupta teaches of receiving a message that causes a change in a user interface comprising causing a first user interface object to move to visually capture a user's attention (col. 6, lines 59-61. On-line client displays the messages to the end user.).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings to cause a first user interface object to move to visually capture a user's attention. The motivation for the suggested combination is that Gupta's teachings would improve the suggested system by enabling an agent to be aware of incoming support requests.

As per claim 31, Pell does not specifically teach the computer program product of claim 30 comprising: context storing instruction to store a second reference to context information, the context information identifying the web browser and context using instructions to use the second reference for providing the context information to the callback function, wherein the computer-readable medium further stores the context storing instructions and the context using instructions.

Gupta teaches an invention for providing notifications comprising of storing a second reference to context information, the context information identifying the web browser and context using instructions to use the second reference for providing the context information to the callback function (col. 5, lines 54-56. Identifier could be address and port with the protocol. col. 8, lines 34-40. Send events/messages received from application server using receiving identifier of client.).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings to store a second reference to context information, the context information identifying the web browser and context using instructions to use the second reference for providing the context information to the callback function. The motivation for the suggested combination is that

Gupta's teachings would improve the suggested system by providing specific information to enable communication with a client. Furthermore, Gupta's teachings would also provide an improvement by efficiently utilizing resources on the network (col. 12, lines 20-24).

As per claim 32, Pell does not specifically teach the computer program product further comprising: user interface changing instructions configured to perform at least one of a group consisting of the following: cause a first user interface object to move to visually capture a user's attention; cause a second user interface object to issue a sound to capture the user's attention; presenting a screen pop of data; and bring a web browser window to the front of a screen, wherein the computer-readable medium further stores the user interface changing instructions.

Gupta teaches of receiving a message that causes a change in a user interface comprising causing a first user interface object to move to visually capture a user's attention (col. 6, lines 59-61. On-line client displays the messages to the end user.).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings to cause a first user interface object to move to visually capture a user's attention. The motivation for the suggested combination is that Gupta's teachings would improve the suggested system by enabling an agent to be aware of incoming support requests.

As per claim 42, Pell does not specifically teach the computer system of claim 41, wherein the instructions further comprise: context storing instruction to store a second reference to context information, the context information identifying the web browser and context using instructions to use the second reference for providing the context information to the callback function.

Gupta teaches an invention for providing notifications comprising of storing a second reference to context information, the context information identifying the web browser and context using instructions

to use the second reference for providing the context information to the callback function (col. 5, lines 54-56. Identifier could be address and port with the protocol. col. 8, lines 34-40. Send events/messages received from application server using receiving identifier of client.).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings to store a second reference to context information, the context information identifying the web browser and context using instructions to use the second reference for providing the context information to the callback function. The motivation for the suggested combination is that Gupta's teachings would improve the suggested system by providing specific information to enable communication with a client. Furthermore, Gupta's teachings would also provide an improvement by efficiently utilizing resources on the network (col. 12, lines 20-24).

As per claim 43, Pell does not specifically teach the computer system of claim 34 wherein the instructions further comprise: user interface changing instructions configured perform at least one of a group consisting of the following: causing a first user interface object to move to visually capture a user's attention; causing a second user interface object to issue a sound to capture the user's attention; presenting a screen pop of data; and bringing a web browser window to the front of a screen

Gupta teaches of receiving a message that causes a change in a user interface comprising causing a first user interface object to move to visually capture a user's attention (col. 6, lines 59-61. On-line client displays the messages to the end user.).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings to cause a first user interface object to move to visually capture a user's attention. The motivation for the suggested combination is that Gupta's teachings would improve the suggested system by enabling an agent to be aware of incoming support requests.

As per claim 53, Pell does not specifically teach the system of claim 52, the server computer further comprising: context storing means for storing a second reference to context information, the context information identifying the web browser and context using means for using the second reference for providing the context information to the callback function.

Gupta teaches an invention for providing notifications comprising of storing a second reference to context information, the context information identifying the web browser and context using instructions to use the second reference for providing the context information to the callback function (col. 5, lines 54-56. Identifier could be address and port with the protocol. col. 8, lines 34-40. Send events/messages received from application server using receiving identifier of client.).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings to store a second reference to context information, the context information identifying the web browser and context using instructions to use the second reference for providing the context information to the callback function. The motivation for the suggested combination is that Gupta's teachings would improve the suggested system by providing specific information to enable communication with a client. Furthermore, Gupta's teachings would also provide an improvement by efficiently utilizing resources on the network (col. 12, lines 20-24).

As per claim 54, Pell does not specifically teach the system of claim 45, the client computer further comprising: the user interface changing means configured to perform at least one of a group consisting of the following: causing a first user interface object to move to visually capture a user's attention; causing a second user interface object to issue a sound to capture the user's attention; presenting a screen pop of data; and bringing a web browser window to the front of a screen.

Gupta teaches of receiving a message that causes a change in a user interface comprising causing a first user interface object to move to visually capture a user's attention (col. 6, lines 59-61. On-line client displays the messages to the end user.).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings to cause a first user interface object to move to visually capture a user's attention. The motivation for the suggested combination is that Gupta's teachings would improve the suggested system by enabling an agent to be aware of incoming support requests.

As per claim 66, Pell does not specifically teaches the system of claim 65, further comprising: a context storing module to store a second reference to context information, the context information identifying the web browser and a context using module to use the second reference for providing the context information to the callback function, wherein the non-transitory computer readable storage medium is configured to store the context storing module and the context using module.

Gupta teaches an invention for providing notifications comprising of storing a second reference to context information, the context information identifying the web browser and context using instructions to use the second reference for providing the context information to the callback function (col. 5, lines 54-56. Identifier could be address and port with the protocol. col. 8, lines 34-40. Send events/messages received from application server using receiving identifier of client.).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings to store a second reference to context information, the context information identifying the web browser and context using instructions to use the second reference for providing the context information to the callback function. The motivation for the suggested combination is that Gupta's teachings would improve the suggested system by providing specific information to enable

communication with a client. Furthermore, Gupta's teachings would also provide an improvement by efficiently utilizing resources on the network (col. 12, lines 20-24).

As per claim 67, Pell does not specifically teach the system of claim 58, further comprising: a user interface changing module configured to perform at least one of a group consisting of the following: causing a first user interface object to move to visually capture a user's attention; causing a second user interface object to issue a sound to capture the user's attention; presenting a screen pop of data; and bringing a web browser window to the front of a screen, wherein the computer readable storage medium is configured to store the user interface changing module.

Gupta teaches of receiving a message that causes a change in a user interface comprising causing a first user interface object to move to visually capture a user's attention (col. 6, lines 59-61. On-line client displays the messages to the end user.).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings to cause a first user interface object to move to visually capture a user's attention. The motivation for the suggested combination is that Gupta's teachings would improve the suggested system by enabling an agent to be aware of incoming support requests.

As per claim 70, Pell does not specifically teach the method of claim 1, wherein the persistent connection is closed when the asynchronous message is asynchronously pushed to the web browser.

Gupta teaches of closing a connection when an asynchronous message is asynchronously pushed to a web browser (col. 7, lines 10-25).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings for the persistent connection as taught by the suggested system to close when the asynchronous message is asynchronously pushed to the web browser. The motivation for the

suggested combination is that Gupta's teachings would improve the suggested system by efficiently utilizing resources on the network (col. 12, lines 20-24).

Claim 69 is rejected under 35 U.S.C. 103(a) as being unpatentable over Pell in view of Martin, Fisher, and Abbott et al. US Patent No. 7,089,497 (Abbott hereinafter).

As per claim 69, Pell teaches the method of claim 1 further comprising: storing the wait request in memory (col. 8, lines 35-49) and pushing the asynchronous message but not removing the wait request from memory in response to pushing the asynchronous message.

Abbott teaches of removing a request in response to sending a notification (col. 17, lines 27-40).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings to remove the wait request from memory in response to pushing the asynchronous message. The motivation for the suggested combination is that Abbott's teachings would improve the suggested system by freeing memory as a result of removing completed requests and preventing duplicate processing of requests.

Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Pell, in view of Martin.

As per claim 16, Pell teaches substantially the invention as claimed including a method comprising:

establishing a connection between the web browser and a web server (col. 5, lines 9-10. Browser. col. 6, lines 18-21, 26-34. Connect to server.),

causing the web browser to provide a wait request to the web server via the connection, wherein, the causing results in the web browser being ready to accept an asynchronous message from the web

server (col. 8, lines 36-46. Request from agent, “log in” procedure. col. 5, lines 40-52; col. 7, lines 26-30. Identify available agent and initiate link with agent.),

the asynchronous message is asynchronously pushed from the web server, the wait request is associated with the web browser (col. 7, lines 17-19. Receive request.), and

the wait request facilitates pushing the asynchronous message from the web server to the web browser; identifying a source of the asynchronous message, associating the wait request with the source, wherein associating the wait request with the source, wherein the associating identifies the web browser as a recipient of the asynchronous message (col. 5, lines 35-37; col. 8, lines 50-54, 63-67. Match particular customer to a particular agent.); and

in response to the web server receiving an incoming event, asynchronously pushing the asynchronous message from the web server to the web browser, wherein the asynchronous message corresponds to the incoming event (col. 7, lines 17-19, 25-31. Receive request. col. 9, lines 53-55. Send request from user to agent.), and

the asynchronous message causes the web browser to present a user interface change in response to the web browser receiving the asynchronous message (col. 6, lines 47-50. Establish link between browsers. col. 9, lines 53-55. Send a support request to selected agent.),

the incoming event comprises a request to establish communication with a user (col. 9, lines 53-55. Send a support request to selected agent.),

the web browser performs an action in response to the asynchronous message (col. 5, lines 46-51. Establish requests/responses with browser. col. 9, lines 23-36. Interaction with requests.), and

the incoming event is received by a communication server (col. 5, lines 21-26. Proxy receives request. col. 5, lines 32-35. Rendezvous service also receives request.).

Pell teaches of a connection between the web browser and a web server but does not specifically teach that the connection is a persistent connection, wherein the persistent connection is maintained for a

period of time. Pell does not specifically teach the providing the wait request allows the web browser to perform a task other than awaiting receipt of the asynchronous message, at least during the period of time and facilitates pushing the asynchronous message via the persistent connection. Pell teaches of pushing the asynchronous message but not specifically via the persistent connection.

Martin teaches establishing a persistent connection between a web browser and a web server, wherein the persistent connection is maintained for a period of time (Paragraph 0021, 0055. Permanent connection), wherein a request provided via the persistent connection allows the web browser to perform a task other than awaiting receipt of an asynchronous message; and wherein the request facilitates pushing the asynchronous message via the persistent connection (Paragraphs 0021, 0055. Client can perform other tasks until a notification is received.).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings for the connection between the web browser and a web server as taught by Pell to be a persistent connection, wherein the persistent connection is maintained for a period of time; to provide the wait request via the persistent connection that allows the web browser to perform a task other than awaiting receipt of an asynchronous message; and for the request to facilitate pushing the asynchronous message via the persistent connection. The motivation for the suggested combination is that Martin's teachings would improve Pell's teachings by allowing the web browser to perform multiple tasks, which would increase efficiency, and allowing the server to initiate messages to the client, especially when the client is behind a firewall.

Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Pell, in view of Martin, Wick, US Patent No. 6,691,162 (Wick hereinafter), and Fisher.

As per claim 17, Pell does not specifically teach the method of claim 16, wherein the message includes an action instruction to cause the web browser to perform the action; and the wait request further

specifies a target process of a plurality of processes, wherein the processes are configured to generate asynchronous messages.

Wick teaches of sending a message that includes an action instruction to cause an interface to perform the action (col. 3, lines 36-40; fig. 8).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings for the message to include an action instruction to cause a user interface to perform the action. The motivation for the suggested combination is that Wick's teachings would improve the suggested system by increasing the likelihood that the agent is made aware of an incoming request for support.

Fisher teaches of a request that specifies a target process of a plurality of processes, and the processes are configured to generate asynchronous messages, wherein the source of the asynchronous message is the target process (col. 4, lines 43-48; col. 5, lines 18-22, 46-50; col. 14, lines 25-36; col. 15, lines 1-11, 21-27).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings for the wait request to specify a target process of a plurality of processes, and for the processes to be configured to generate asynchronous messages, wherein the source of the asynchronous message is the target process. The motivation for the suggested combination is that Fisher's teachings would improve the suggested system by enabling users to register for event notifications from specified sources while limiting the event notifications to authorized users.

Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Pell, in view of Martin and Gupta.

As per claim 18, Pell does not specifically teach the method of claim 16 wherein the change in the user interface comprises at least one of a group consisting of the following: causing a first user

interface object to move to visually capture a user's attention; causing a second user interface object to issue a sound to capture the user's attention; presenting a screen pop of data; and bringing a web browser window to the front of a screen

Gupta teaches of receiving a message that causes a change in a user interface comprising causing a first user interface object to move to visually capture a user's attention (col. 6, lines 59-61. On-line client displays the messages to the end user.).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings to cause a first user interface object to move to visually capture a user's attention. The motivation for the suggested combination is that Gupta's teachings would improve the suggested system by enabling an agent to be aware of incoming support requests.

Conclusion

Examiner has cited particular sections of the reference(s) that are applied to the claims. While the sections are cited for convenience and are representative of the teachings of the prior art, other sections of the reference(s) may be relevant and applicable to the claims. It is respectfully requested that Applicant fully consider the reference(s) in its entirety when responding to the Office action.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joshua Joo whose telephone number is 571 272-3966. The examiner can normally be reached on Monday to Friday 7:30AM to 4:00PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor Andrew Caldwell can be reached at 571-272-3868. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Joshua Joo/
Primary Examiner, Art Unit 2445